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force sensing means for sensing the magnitudes of the forces that are applied to said support means through each of said resistors when said panel member is touched at a selected location thereon by detecting changes of the electrical resistance of each of said resistors that result from said touching of said panel member, and

location analyzing means for sensing the location on said panel member that is being touched by comparing the magnitudes of said forces and for generating the one of said signals that corresponds to the sensed location.

18. The apparatus of claim 17 further including a plurality of strips of elastomeric material each being disposed between a separate one of said pressure sensitive resistors and said support means.

19. The apparatus of claim 17 wherein said pressure sensitive resistors extend along edge regions of said panel member and wherein said support means includes linear support members fitted onto said edge regions of said panel members, said support members having grooves extending therealong in which said edge regions of said panel members and said pressure sensitive resistors are disposed.

20. The apparatus of claim 17 wherein pairs of said pressure sensitive resistors extend along edge regions of said panel member, the resistors of each pair being disposed on opposite faces of said panel member edge regions and wherein said support means includes support members extending along said edge regions of said panel members and having grooves in which said edge regions of said panel members including said pairs of resistors are received, further including a plurality of strips of elastomeric material disposed in said grooves of said support members, said strips of elastomeric material being situated between said pressure sensitive resistors and said support means and wherein said grooves of said support members are proportioned to compress said strips of elastomeric material against said pressure sensitive resistors whereby touching a surface of said panel member increases the compression of one of each pair of pressure sensitive resistors and reduces compression of the others of each pair of pressure sensitive resistors.

21. The apparatus of claim 17 wherein said panel member is substantially rectangular and wherein at least one of said pressure sensitive resistors extends along each edge region of said panel member and wherein said support means includes four channel shaped support

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members each being fitted onto a separate one of said edge regions of said panel member.

22. The apparatus of claim 21 further including strips of elastomeric material disposed within said channel shaped support members between the pressure sensitive resistors and the inner walls of said support members.

23. In a touch sensitive panel for generating selected ones of any of a plurality of different signals each of which is generated by touching a different location on the panel, the combination comprising:

a rectangular panel member formed of material which exhibits a degree of elasticity,

a plurality of panel member supports which support said panel member at spaced apart regions thereof, the panel member supports being separate from the panel member,

force sensing means positioned on said panel member for sensing the magnitudes of the forces that are applied to each of said spaced apart supports by said panel member when said panel member is touched at a selected location thereon, wherein said forces are sensed by detecting the deformation of said panel member in the vicinities of each of said supports that is caused by touching of said panel member, and

location analyzing means for sensing the location on said panel member that is being touched by comparing the magnitudes of said forces that are applied to said spaced apart supports by said panel member and for generating the one of said signals that corresponds to the sensed location

wherein said force sensing means includes a plurality of strain gauges of the type which exhibit a change of electrical properties in response to forces exerted thereon,

and further wherein a pair of said strain gauges are secured to said panel member in the vicinity of each of said panel member supports, the strain gauges of each pair being secured to opposite surfaces of said panel member, each of said strain gauges having an output terminal which exhibits a voltage that varies in response to flexing of the strain gauge, further including a plurality of differential amplifiers each having inputs connected to said output terminals of a separate pair of said strain gauges and each having an output coupled to said location analyzing means to transmit a signal thereto that is indicative of the voltage difference at the output terminals of the pair of strain gauges to which the amplifier is connected.

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